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Digicatenosporium polyramosum, a new hyphomycete from Brazil

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Abstract—*Digicatenosporium polyramosum* gen. & sp. nov., collected on the decaying bark of an unidentified dicotyledonous plant in Bahia, Brazil, is described and illustrated. This species is unique in its distinct unbranched conidiophores, monoblastic integrated determinate conidiogenous cells, and highly digitate branched blastocatenate reddish to yellowish brown or brown conidia.

Key words— asexual fungi, systematics, tropical fungi

Introduction

During a mycological survey of fungi associated with leaf litter in the Brazilian Caatinga biome at Coribe, Bahia State, an interesting fungus was collected from the decaying bark of an unidentified dicotyledonous plant. It showed remarkable differences from all previously described hyphomycete genera (Seifert et al. 2011) and is here proposed as a new genus and species.

Materials & methods

Samples of submerged litter were placed in paper and plastic bags, taken to the laboratory, and prepared according to Castañeda-Ruiz (2005). Mounts were prepared in PVL (polyvinyl alcohol, lactic acid, and phenol), and measurements were made at a magnification of ×1000. Photomicrographs were obtained with an Olympus BX51 microscope equipped with bright field and Nomarski interference optics. The type specimen is deposited in the Herbarium of Universidade Estadual de Feira de Santana, Bahia, Brazil (HUEFS).

Taxonomy

Digicatenosporium S.M. Leão, Gusmão & R.F. Castañeda, **gen. nov.**

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Differs from *Digitodesmium* by its distinct conidiophores and branched blastocatenate conidia.

Type species: *Digicatenosporium polyramosum* S.M. Leão et al.

Etymology: From the Latin: *digi-* (from *digitatus* for finger shaped) and *-catenosporium* for the conidia in chains.

Asexual fungi. Colonies on natural substratum hairy to granulose, ferruginous or reddish brown. Mycelium mostly immersed. Conidiophores distinct, single, unbranched, erect, septate, pale brown. Conidiogenous cells monoblastic, integrated, terminal, determinate; conidial secession schizolytic. Conidia digitate or cheiroid, acrogenous, reddish brown to yellowish brown, verruculose, central arms closely packed, marginal arms divergent, aseptate or euseptate, subulate to slightly obclavate, some blastocatenate at the apex.

Digicatenosporium polyramosum S.M. Leão, Gusmão & R.F. Castañeda, **sp. nov.**

MycoBank MB810774 Fig. 1

Differs from *Digitodesmium* spp. by having distinct conidiophores and complex blastocatenate conidia.

Type: Brazil, Bahia, Coribe, Serra do Ramalho, 13°62′S 44°37′W, 600–800 m alt., on decaying bark of an unidentified dicotyledonous plant, 4 March 2008, coll. S.M. Leão-Ferreira (**Holotype**: HUEFS 210443).

Etymology: From the Greek *poly-* for many, numerous and the Latin *–ramosum* for branched.

Colonies on natural substratum hairy to granulose, ferruginous or reddish brown. Mycelium mostly immersed. Conidiophores distinct, single, unbranched, erect, cylindrical, 1–2-septate, smooth, 15–40 × 3–6 µm, pale brown. Conidiogenous cells monoblastic, cylindrical, integrated, terminal, determinate; conidial secession schizolytic. Conidia acrogenous, digitate or cheiroid, with 6–35 arms, overall 20–75 × 15–40 µm, basal cells cuneiform, 5–6 × 3–7 µm, reddish brown to yellowish brown to brown, arms paler above, verruculose, cylindrical, subulate to slightly obclavate, 0–4-septate, yellowish brown to reddish brown below, paler above, individually 15–30 × 5–8 µm; central arms cylindrical, closely packed, loosely incurved or parallel, dark reddish brown or brown; marginal arms divergent, often producing an apical secondary conidium, which may later repeatedly undergo the same process, producing a complex chain.

Note: *Digicatenosporium* superficially resembles *Digitodesmium* P.M. Kirk (Kirk 1981), but *Digitodesmium* has solitary conidia that have several to many

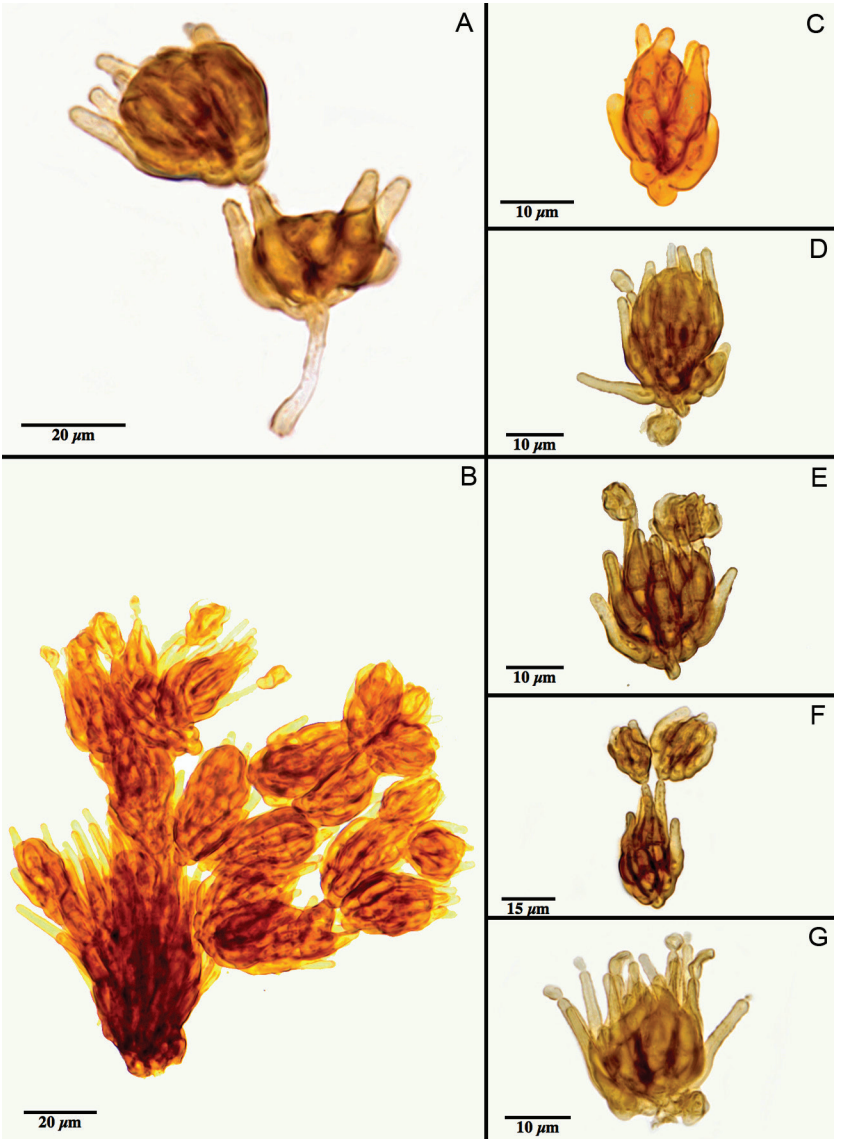

Fig. 1. *Digicatenosporium polyramosum* (HUEFS 210439). A. Conidiophore, conidiogenous cell, and conidia. B. Conidia in branched chains. C–G. Conidia and secondary conidia.

parallel cylindrical multiseptate arms. *Digicatenosporium* exhibits an unusual method for developing conidial chains in that only the apical cells of a random number of the longer marginal arms produce a secondary conidium from the original conidia while repetitions of this event at higher levels produce complex branched chains.

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